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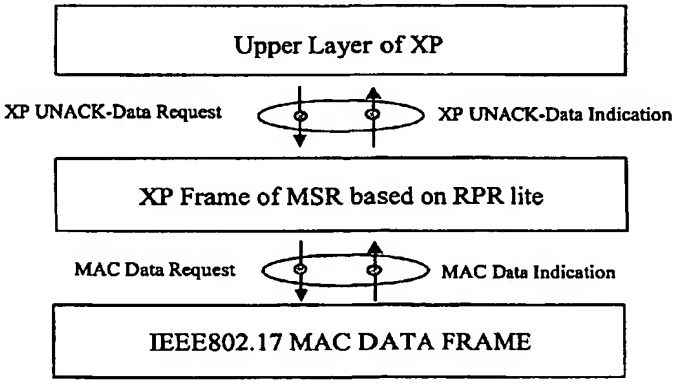
(54) Title: TRANSMISSION APPARATUS AND METHOD OF MULTI-SERVICE TRIBUTARIES OVER RPR



Relationship between XP and RPR MAC, Upper Layer and XP

(57) Abstract: The present invention relates to technology located in RPR MAC Client presents MSR Based on RPR including RPR Lite. 802.17 lite uses local addresses and the multicast address in providing of tributary services and uses 802.17 frame format that allows Technology to use payload within Technology Ethertype. Fairness A0 provisioned traffic (and subsequently no fairness) is all that is required to provide Technology. This invention is only used in configurations where tributary service is managed such that over provisioning does not occur. Architecturally, single-ring, the link, broadcast and pseudo-mesh topologies are provided also. The applications used to this technology are used to provide tributary transparent transport with various existing data networks and services (e.g. Ethernet, FR, ATM, ISDN, DDN, G.702 etc), tributary based bandwidth management with symmetry and asymmetry (e.g. bandwidth limitation and tributary bundling), tributary based 1+1, 1:1 and 1:N protection within 50 ms, tributary based multicast, tributary based security application (e.g. line-speed filtering), tributary based performance monitoring in the 15-minute and 24-hour, and is also used to provide forwarding of XP data link frames (also being a tributary) similar to functionality found in a more complex routing data system. This invention is connection based and pre-plan solution, tributary bandwidth is programmable by network management system, or initiated by end user according to customer needs and payment. The way of the bandwidth allocation is changed from the fixed to dynamic.

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